2002 and £335 million in UK during 2001. **CONCLUSIONS:** Ulipristal appears as effective as levonorgestrel in preventing unintended pregnancies with similar safety profile. Substantial cost-savings can be expected with appropriate awareness programs about emergency contraceptives among women.

PIH2

PEDIATRIC INTENSIVE CARE UNIT (PICU) ADMISSIONS FOR RESPIRATORY SYNCYTIAL VIRUS (RSV) INFECTION IN THE ERA OF PALIVIZUMAB PROPHYLAXIS

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OBJECTIVES: To examine the characteristics of patients admitted to PICU with RSV infection following provincial approval of RSV prophylaxis in June 2002. Secondly, to determine if patients had received palivizumab and document incurred morbidities. **METHODS:** A retrospective, hospital medical records review of all PICU admissions for RSV infection from January 1, 2003 to December 31, 2009. RSV infection was identified by ICD codes and cases were confirmed by RSV IFA test, culture, or PCR. Data was collected on baseline demographics, underlying disease, criteria for hospitalization, type of respiratory illness and management, complications and palivizumab prophylaxis. Group 1 patients (≤2 years) were compared to Group 2 (>2–18 years). **RESULTS:** A total of 181 patients were admitted with RSV infection over 7 years. Group 1 (n = 152); Group 2 (n = 29) had a mean admission age in months (SD); 3.7 (5.7) versus 59.9 (37.7). Majority (79.6%) Group 1 versus only 20.7% Group 2 ($P < 0.001$) had no underlying disease. 97.4% versus 93.1% were admitted with respiratory distress and most had bronchiolitis; 88.8% versus 55.2 % ($P < 0.001$), decreased oxygen saturation; 77% versus 75.9% and inability to maintain intake; 75.7% versus 44.8% ($P < 0.01$). Fifty percent versus 41.3% required mechanical ventilation and 81.6% versus 69.0% received antibiotics. Median days (range) in PICU was 5 (1–73) versus 2 (1–36). Median length of hospital stay days (range) was 9 (1–113) versus 7 (1–64) ($P < 0.05$). The overall RSV positive, PICU hospitalization rate was 5.7%. There were few complications: respiratory (2.8%); concurrent bacterial sepsis (5.5%). Only 3.3% children had received prophylaxis. 1 death was attributed to RSV infection. **CONCLUSIONS:** Majority of admissions comprised infants ≤2 years of age. 63.3% were ≥36 weeks gestation without underlying disease and in total 88.4% would not qualify for prophylaxis. Current Canadian RSV prophylaxis guidelines have significantly impacted PICU admission rates in high-risk infants.

PIH3

PARENTERAL ALANYL-GLUTAMMINE IN CRITICALLY ILL PATIENTS: A BAYESIAN META-ANALYSIS OF PUBLISHED TRIALS

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OBJECTIVES: Glutamine, although abundant in human tissue, can become conditionally essential in clinical conditions with hyper-catabolism and glutathione depletion (burns, pancreatic necrosis, surgical complications), but has not been added to parenteral nutrition solutions for a long time, for its alleged non-essentiality and the low solubility and stability in aqueous solutions, which have been solved by conjugation with alanine. In 2002 a meta-analysis of available trials conducted with alanylglutamine dipeptide revealed significant reductions of mortality, infections and ICU length of stay. Since then, data from other trials have become available. Aim of the present study is to update the treatment effect estimates by means of a series of Bayesian random effects models. **METHODS:** We searched EMBASE and Medline for clinical trials of standard total parenteral nutrition (TPN) vs. TPN + parenteral alanylglutamine in critically ill patients reporting hospital mortality, relative ICU-incident infection rate, and relative hospital length of stay. For each outcome, a series of Bayesian random effects models was specified, in which the treatment effect observed in the individual trials is assumed to be drawn from a common distribution and expressed as a relative risk or duration. **RESULTS:** Outcomes from 15 trials and 781 patients were retrieved. The main models, i.e. simple hierarchy random effects models with neutral priors, estimate a relative mortality of 0.70 (95% CrI: 0.46–0.97), a relative infection rate of 0.71 (95% CrI: 0.49–0.97), and a relative length of stay of 0.91 (95% CrI: 0.76–1.00). Secondary analyses indicated some heterogeneity in the magnitude and reliability of the benefits in sub-groups of the wider critically ill patient population. The incorporation of prior knowledge leads to significantly more precise estimates and permits to obtain comfortable reliability even on subgroup-specific treatment effects estimates. **CONCLUSIONS:** In conclusion, the available evidence supports a highly credible beneficial effect of alanylglutamine on mortality, infections and hospital length of stay in ICU-admitted critically ill patients.

PIH4

COMPARING THE MODEL PREDICTED VACCINE IMPACT AGAINST ROTAVIRUS HOSPITALIZATION WITH OBSERVED DATA IN BELGIUM

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OBJECTIVES: In reimbursement files models estimate the events avoided over time with new interventions. Simulations are performed in the absence of long-term observational data. In this study observed hospitalization data prior- and post-rotavirus vaccination in Belgium were compared to predicted (i.e. modeled) results after 1,2 and 3 years. **METHODS:** A Markov cohort model estimated over time the number of hospitalizations potentially avoided with rotavirus vaccination in Belgium. We adjusted the model to the observed vaccine coverage and to Rotarix™ vaccine efficacy from clinical trials. The obtained modeling results were compared with observed data collected from 9 Belgian hospitals (2 years pre- and 3 consecutive years post-vaccination). The outcomes of both studies are expressed as a percentual decrease in hospitalizations for 2 age-groups (<2 and <5 years old), after each year post-vaccination. The differences are presented in absolute and relative (%) differences for each subsequent year post-vaccine launch. **RESULTS:** The observed data provided slightly better outcomes than the modeled results. After 1 year the absolute difference in decrease of hospitalizations between observed and modeled data was 3% (11%) for both age-groups. After 2 years the absolute differences were 3.5% (6%) and 6% (12%) for the 2 y and 5 y age-group respectively. In the last observation year the absolute differences were respectively 2.8% (4%) and 9.3% (13%). **CONCLUSIONS:** Compared with the observed data the model estimates are conservative. The more favorable observational results are explained by the indirect vaccine effect on non-vaccinated age-groups which is not captured by the static model. The relatively better model fit in the <2 y old with increasing time is explained by the accumulated vaccine impact over time: from 26% (1st year) to 68% (3rd year). *Rotarix* is a trademark of the GlaxoSmithKline group of companies.

PIH5

PHARMACOEPIDEMIOLOGICAL BURDEN OF PREGNANCY IN BELARUS

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OBJECTIVES: Application of medicines during pregnancy is a challenge of clinical pharmacology. We have analyzed priorities of physicians while choosing medications in the course of various diseases during pregnancy and adherence of pregnant women to the appointed treatment in Belarus. **METHODS:** It was prospective multi-center cross-sectional epidemiological research. We interviewed 1334 pregnant women and 619 physicians with diverse specialties in 6 regions of the country using a structured questionnaire from January to December 2009. All questionnaires have undergone statistical analysis. **RESULTS:** We found that 34.5% of the pregnant women who took part in questioning have had chronic diseases. Medical products were prescribed for 91.7% (1223) women. a total of 23.8% of them have received more than 5 medical products. Vitamins and drugs with microcells (magnesium, iodine, iron and calcium), herbal drugs (valerian, leonurus and eleutherococcus) were in the lead in structure of prescription. 91,8% of the pregnant women took all prescribed medicines. 7.7% (103) women took antibacterial medicines following recommendations of the doctor. a total fo 365 women (27.3%) took medicines without prescription (625 cases). Non-prescribed drugs during pregnancy had mostly been recommended by family or friends (24.1% of women) and pharmacists in drugstores (24.1%). **CONCLUSIONS:** Pregnant women in Belarus are active consumers of medicines (vitamins, microcells, herbal drugs, bioadditives) themselves and with doctors' prescription. The widespread use of medicines indicates an increased need for documentation and education about the safety of medicines in the course of pregnancy. Application of these medications creates additional financial burden (in addition to necessary medicines and products), and it does not necessarily positively influence health. Educational programs for pharmacists, doctors and pregnant women are necessary for improvement of drug administration.

PIH6

IMPACT OF ROTAVIRUS VACCINATION ON ACUTE GASTROENTERITIS RELATED EMERGENCY ROOM VISITS IN CHILDREN ≤FIVE YEARS OLD IN BELGIUM

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OBJECTIVES: Belgium is one of the few countries to implement rotavirus vaccination within its universal paediatric immunization programme. This study was designed to measure the impact of rotavirus vaccination on acute gastroenteritis (AGE) related emergency room (ER) visits in children aged ≤5 years in Belgium. **METHODS:** A retrospective observational study was performed across 11 Belgian participating centres. Each centre provided an anonymised list of all ER visits of children aged ≤5 years during the periods June 2004–May 2006 (pre-vaccine period) and June 2007–May 2009 (post-vaccine). a sample of 7620 ER visits (3699 pre-vaccine; 3921 post-vaccine) was randomly selected from the 180,253 ER visits reported. Patient demographics and information on the reason for ER visit were collected from all randomly selected visits. If the visit was AGE-driven, additional data were collected on vaccination status, symptoms, tests performed, treatment, and visit outcome. **RESULTS:** The proportion of AGE-driven ER visits was 11% in the 2-year pre-vaccine period (N AGE-driven visits/Total N ER visits = 412/3,699). After insignificant change to 10.5% during the 1st year after vaccine introduction (N = 208/1,977), this proportion significantly declined to 8.2% (26.6% reduction; p-value < 0.001) in the 2nd year (N = 159/1,944). a strong seasonal effect exists in the proportion of AGE-driven ER visits on the total number of ER visits, peaking in February and March. The number of patients who needed to be hospitalised because of AGE declined over time (from a yearly average of 94 pre-vaccine to 62 and then 44 in the 2 consecutive years post vaccine introduction). Oral and IV rehydration are the most commonly used treatments. Their use also declined after vaccine introduction. **CONCLUSIONS:** A significant decline in AGE-driven ER visits and subsequent hospitalizations was observed in Belgium after introduction of a universal mass vaccination program against rotavirus. AGE cases appeared less severe.